

June 28, 1937

Mr. Franklin C. Hansen,
Boulder, Utah.

Dear Sir: REL: BOULDER-DEER CREEK DISTR.

This will acknowledge receipt of your letter of June 24, together with a report on the Boulder-Deer Creek distribution for 1936. The report has been filed for future reference.

I regret that an engineer from this office was unable to visit and make a field inspection of your distribution system last year. However this year will be different. You might therefore expect him to give you a call some time soon, - possibly during August.

You ask how to color a stream with a chemical in such way that the water might be detected a mile distant. Several methods are used. Possibly the most successful is by the use of Fluorescein. For the distance of one mile about three pounds would be required. When you are ready to make the observation, mix the Fluorescein with water in a crock jar or in a wooden keg, making in all about seven gallons. When well mixed, pour it into the spring or stream of water which you desire to trace, following which take samples of water at the point where you suspect it might be coming out and test them in a drinking glass against the sun. In order that you might be able to know the color in the water made by Fluorescein, put the slightest amount possible into a glass of water. Place the glass of water thus filled between your eye and the sun, then tip it slightly, - forward and backward from a vertical, and observe the green rays. Samples of water taken from below where the Fluorescein has been deposited can also be tested in this way. If you discover the rays, the evidence is conclusive that the water is identical with that where the Fluorescein was first deposited. If not, the opposite is true.

Yours very truly,

T. H. Humpherys
STATE ENGINEER

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